Operating Instructions and User's Information Manual

VIESMANN

Please file in Service Binder

Vitotronic 300, Model GW2
Outdoor-reset logic digital boiler and heating circuit control unit

VITOTRONIC 300

C US
Certified as a component part of Viessmann boilers only

IMPORTANT

Read and save these instructions for future reference.

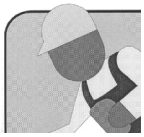
5285 942 v1.4 05/2012

Safety, Installation and Warranty Requirements

Please ensure that this manual is read and understood before commencing installation. Failure to comply with the issues listed below and details printed in this manual can cause **product/property damage, severe personal injury,** and/or **loss of life**. Ensure all requirements below are understood and fulfilled (including detailed information found in manual subsections).

Licensed professional heating contractor
The installation, adjustment, service, and maintenance of this equipment *must be* performed by a licensed professional heating contractor.

■ *Please see section entitled "Important Regulatory and Installation Requirements."*



Advice to owner
Once the installation work is complete, the heating contractor must familiarize the system operator/ultimate owner with all equipment, as well as safety precautions/requirements, shut-down procedure, and the need for professional service annually before the heating season begins.

Product documentation
Read all applicable documentation before commencing installation. Store documentation near boiler in a readily accessible location for reference in the future by service personnel.

■ *For a listing of applicable literature, please see section entitled "Important Regulatory and Installation Requirements."*

Warranty
Information contained in this and related product documentation must be read and followed. *Failure to do so renders warranty null and void.*

Safety Terminology

Take note of all symbols and notations intended to draw attention to potential hazards or important product information. These include "WARNING", "CAUTION", and "IMPORTANT". See below.

DANGER
Indicates an imminently hazardous situation which, if not avoided, will result in death, serious injury or substantial product / property damage.

WARNING
Indicates an imminently hazardous situation which, if not avoided, could result in substantial product/property damage, serious injury or loss of life.

CAUTION
Indicates an imminently hazardous situation which, if not avoided, may result in minor injury or product / property damage.

IMPORTANT

Helpful hints for installation, operation or maintenance which pertain to the product.

5285 942 v1.4

Page

Useful tips

Introductory information
For your safety ... 2

Instructions in brief

Ready for operation
The main controls ... 4
The heating system is preset 4
Overview of controls and indicators ... 5
Select the heating circuit – before every setting and scanning operation ... 6
Selecting the heating program (winter, summer) ... 7
Changing the room temperature (day and night temperature) ... 8

Using the comfort functions
Setting the party mode ... 9
Activating the energy saving mode ... 10

Reference guide

Switching on and off
Starting up the heating system ... 11
Shutting down the heating system ... 11

Settings
Time programs ... 12
Changing the domestic hot water temperature ... 18
Setting the energy saving mode for the holiday period ... 18
Resetting the time and date ... 20
Selecting the language ... 20
Changing the heating pattern of the boiler ... 21

Scanning
Scanning temperatures and operating status information ... 24

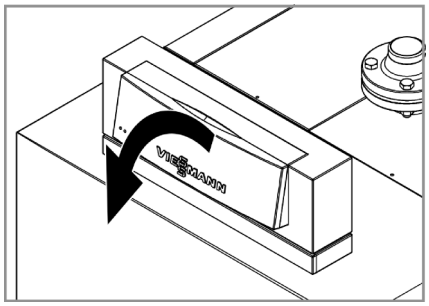
Information

Troubleshooting guide
Special displays ... 25
Diagnosis and correction ... 27

Servicing/cleaning instructions and note on disposal of unwanted equipment ... 30

5285 942 v1.4

The main controls



You can carry out all the settings on your heating system centrally on the control unit and on the built-in programming unit.

If your system is equipped with remote controls, you can also use the remote controls for the settings.

See operating instructions for the remote control

Please also refer to the section entitled "Special displays" in these instructions.

The control unit is behind the hinged cover.
The hinged cover is opened by pulling the top gently downwards towards you.
You must close the hinged cover again after use.

The heating system is preset ...

The control unit is preset in the factory to a standard operating mode.
The heating system is therefore ready for operation. You can change the factory settings to suit your individual preferences.

Date and time (CET)
The date and time are preset in the factory. Resetting for daylight saving time takes place automatically.

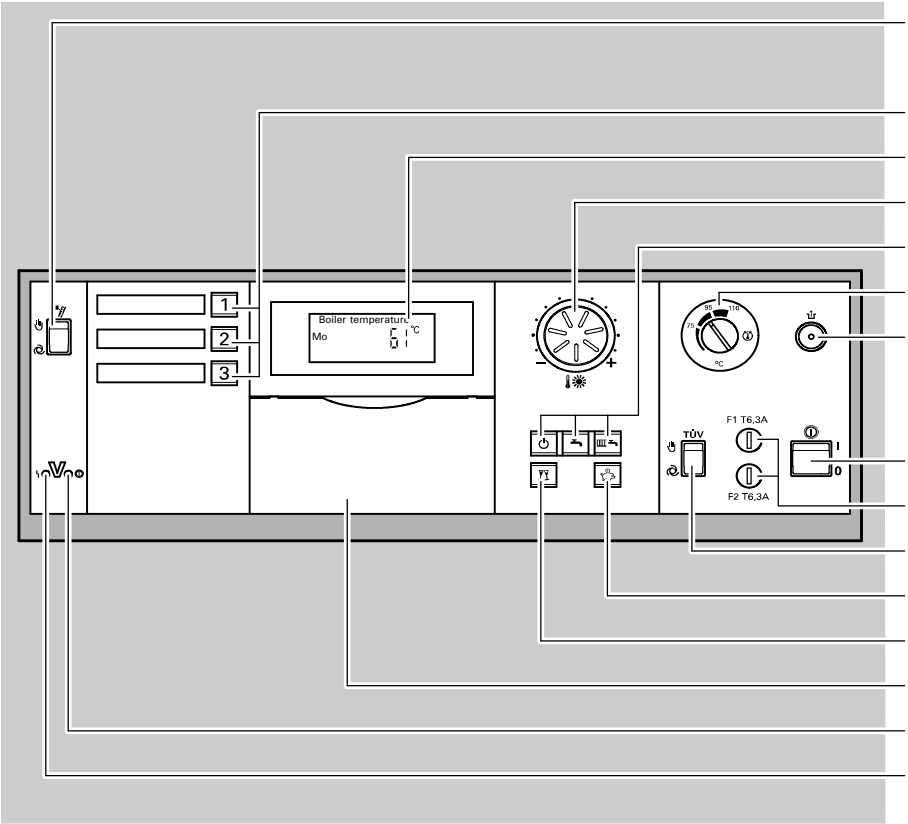
Heating program
The heating program is set for "Heating and domestic hot water", i.e. heating and domestic hot water heating take place in accordance with the time programs.

Time programs
Between 06:00 and 22:00 hrs, heating takes place with the normal room temperature and, between 05:30 and 22:00 hrs, domestic hot water heating (if a DHW tank is installed).

Heating with a reduced room temperature takes place between 22:00 and 06:00 hrs (set to freeze-up protection at 3°C / 37°F).

5285 942 v1.4

Overview of controls and indicators



Override switch (page 27)

Heating circuit selector buttons (page 6)

Display window

Normal room temperature (page 8)

Heating programs (page 7)

Adjustable high limit

Fixed high limit

Control Power (page 11)

Fuses

TÜV TEST button (for service purposes only)

Energy saving mode (page 10)

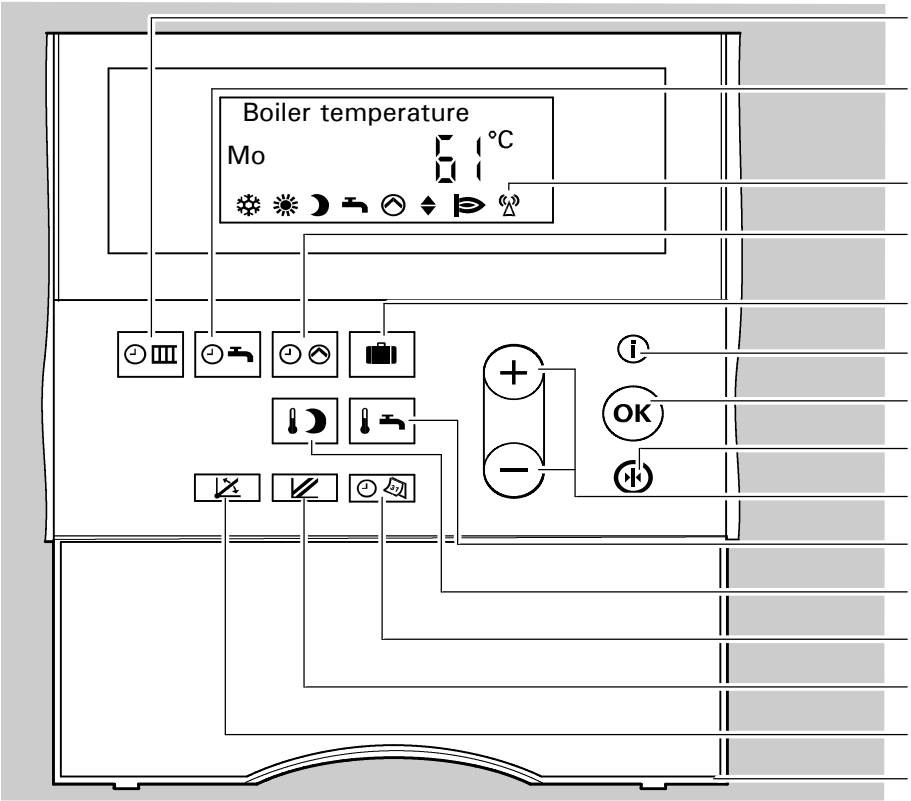
Party mode (page 9)

Hinged cover of programming unit

Operating status indicator (green) (page 11)

Fault indicator (red) (page 27)

Controls under the hinged cover of the programming unit



Time program for heating (page 12, 13)

Time program for domestic hot water heating (page 12, 15)

Other symbols (page 6)

Time program for DHW re-circulation pump (page 12, 15)

Holiday program (page 18)

Information (page 20, 24, 26)

Confirmation

Factory settings (page 6)

Setting buttons

Domestic hot water temperature (page 18)

Reduced room temperature (page 8)

Time/date (page 20)

Heating curve shift (page 21)

Heating curve slope (page 21)

Hinged cover of programming unit

5285 942 v1.4

Overview of controls and indicators *(continued)*

Other display symbols
(These are not displayed continuously, but appear according to system type and operating status)

- Risk of freezing
- Heating with normal room temperature
- Heating with reduced room temperature
- Domestic hot water heating, DHW pump ON
- Heating circuit pump ON
- Mixing valve open
- Mixing valve closed
- Burner ON

Adjustment of the display window contrast
Open the hinged cover on the programming unit, press OK and, at the same time, adjust the contrast with the + or − button.

Factory settings
Press this button to reset all altered values to their factory settings.

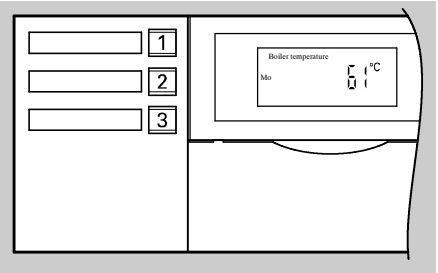
Flashing data
Data flashing in the display window means that new settings can be entered.

Select the heating circuit – before every setting and scanning operation

On heating systems with only one heating circuit, you can start making all settings immediately.

*On heating systems with **two** or **three** heating circuits, the corresponding heating circuit must be selected before carrying out **each** setting and scanning operation.*
Heating circuit selector button 1: Heating circuit 1 without mixing valve (system circuit)
Heating circuit selector button 2: Heating circuit 2 with mixing valve
Heating circuit selector button 3: Heating circuit 3 with mixing valve

The heating circuits are individually labelled by your heating contractor.



Press 1 or 2 or 3; the following buttons are illuminated:

- the heating circuit selector button
- the current heating program (see page 7)
- the party or energy saving mode, if selected (see page 9 and 10).

You can now start making the settings and adjustments for the selected heating circuit.

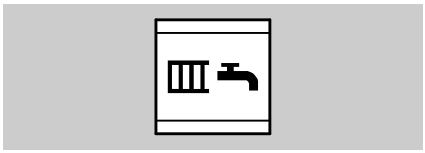
→ *If you have not selected the required heating circuit before starting to carry out the settings, the following instruction appears in the display window: "First select button 1 or 2" or "First select button 1, 2 or 3".*

→ *If no further settings are made, the illumination of the buttons is extinguished after a short time.*

Selecting the heating program (daylight saving time)

1. Press the heating circuit selector button; the button is illuminated.

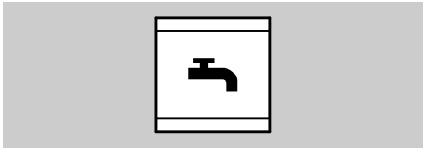
2. Select the required heating program with the , or button. → *The selected heating program appears in the display window for a short time.*



Heating and domestic hot water
- Heating with alternating normal and reduced room temperature (freeze-up protection) according to the selected time program
- Domestic hot water supply (if a DHW tank is installed) and DHW re-circulation pump (if installed) ON according to the selected time program
- Freeze-up protection of the boiler and the DHW tank

→ ***Example***
For the winter and transitionary periods.

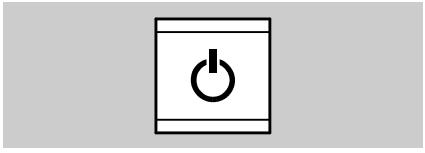
Please note:
When the button is illuminated, the "☀" symbol appears in the display window during heating with the normal room temperature; the "☽" symbol is illuminated during heating with a reduced room temperature higher than 3°C (see page 8).



Domestic hot water only
- No heating
- Domestic hot water supply (if a DHW tank is installed) and DHW re-circulation pump (if installed) ON according to the selected time program
- Freeze-up protection of the boiler and the DHW tank

→ ***Example***
For the summer.

Please note:
If no DHW tank is connected, "Without function" is displayed.



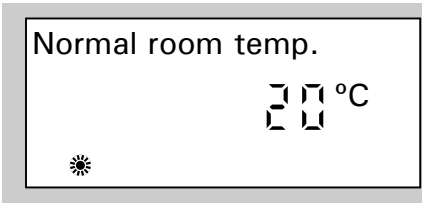
Standby operation
- No heating
- No domestic hot water supply
- Freeze-up protection of the boiler and the DHW tank

→ *The circulation pumps are switched on for a short time every 24 hours to prevent them from seizing up.*

Changing the room temperature

In the "Heating and domestic hot water" heating program, heating takes place with alternating "normal room temperature" and "reduced room temperature" according to the selected time program (see page 12).
You can set the required room temperature as follows.

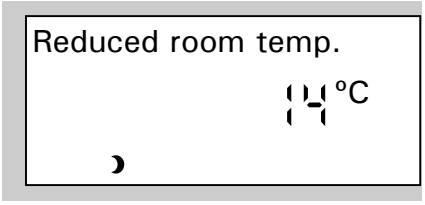
To change the "normal room temperature" (day temperature)



Factory setting: 20°C / 68°F from 06:00 to 22:00 hrs.
The "normal room temperature" can be set between 3 and 37°C / 37 and 99°F.

1. Press the heating circuit selector button; the button is illuminated.
2. Set the required temperature value with the "🌡☀" selector knob.
   The display changes after a short time and shows the boiler temperature.

To change the "reduced room temperature" (night temperature)



Factory setting: freeze-up protection 3°C / 37°F from 22:00 to 06:00 hrs.
The "reduced room temperature" can be set between 4 and 37°C / 39 and 99°F.

→ ***Example***
Set to save energy at times when rooms are not in use.

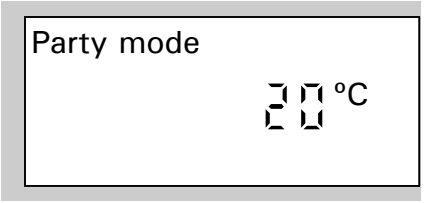
1. Open the hinged cover on the programming unit.
2. Press the heating circuit selector button; the button is illuminated.
3. 🌡☽ Press 🌡☽; the previous temperature setting flashes in the display window.
4. ⊕/⊖ Press the ⊕/⊖ button until the required temperature value appears.

→ ***Please note:***
If the temperature value 3°C / 37°F is selected, "Freeze-up protection" appears in the display window.

5. OK Confirm by pressing OK; the temperature value stops flashing and is stored.
   The display changes and shows the boiler temperature.
6. Close the hinged cover on the programming unit.

Setting the party mode

*Switch on the party mode when you require **heating** and **domestic hot water** (if a DHW tank is installed) for a short time independently of the preset heating and time program.*



To activate the party mode

1. Open the hinged cover on the programming unit.
2. Press the heating circuit selector button; the button is illuminated.
3. Press the party button; the button is illuminated, the party mode display appears in the display window and the party temperature value flashes.
4. To change the party temperature: Press the ⊕/⊖ button until the required temperature value appears.
5. Confirm by pressing OK; the temperature value stops flashing and is stored. The display changes and shows the boiler temperature.
6. Close the hinged cover on the programming unit.

To cancel the party mode

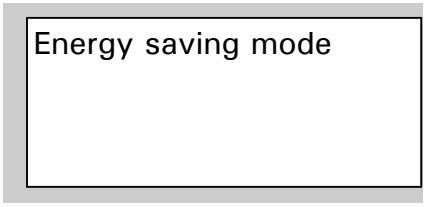
- The party mode is cancelled the next time the preset heating program switches automatically to heating with the "normal room temperature".
- If you want to cancel the party mode immediately, press the heating circuit selector button and the party button again; the button is no longer illuminated.

Activating the energy saving mode

The energy saving mode is only possible in the "🛏" heating program. Switch on the energy saving mode when you require particularly economic heating for a short time. In the energy saving mode the preset room temperature is automatically lowered.

To activate the energy saving mode

1. Press the heating circuit selector button; the button is illuminated.



2. Press ; the button is illuminated, the energy saving mode display appears in the display window for a short time.

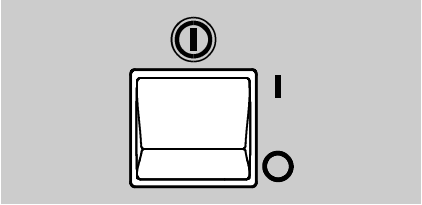
To cancel the energy saving mode

- The energy saving mode is cancelled automatically the next time the preset heating program switches to heating with the "reduced room temperature".
- If you want to cancel the energy saving mode immediately, press the heating circuit selector button and the button again; the button is no longer illuminated.

Starting up the heating system

The initial start-up and matching of the control unit to local conditions and the structural characteristics of the building must be carried out by your heating contractor.

1. Check the pressure of the heating system on the pressure gauge.
2. Open the shut-off valves in the oil pipes (at the tank and filter) or open the gas shut-off valve, whichever is applicable.
3. Switch on the power supply, e.g. at the separate fuse or a power supply disconnect switch.



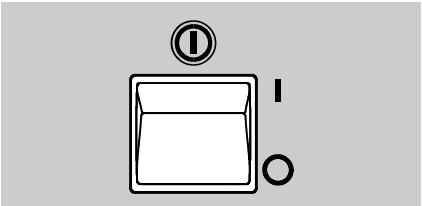
4. Switch on the heating system on/off switch "⏻" ; the operating status is indicated by the green lamp and, after a short time, the boiler temperature appears in the display window (see page 5).

→ *The heating system and, if installed, the remote controls are now ready for operation.*

Shutting down the heating system

*If you do not want to use your heating system temporarily, switch to **standby operation** (see "Selecting the heating program", page 7).*

If you do not want to use your heating system for a long period (several months), you should shut down the system.
We advise you to contact your heating contractor before and after shutting down the heating system for long periods. Your heating contractor will take any necessary action, e.g. for freeze-up protection of the system or to safeguard the heat exchange surfaces.



1. Switch off the heating system on/off switch "⏻".

→ *The green lamp (operating status indicator) goes out.*

2. Close the shut-off valves in the oil pipes (at the tank and filter) or close the gas shut-off valve, whichever is applicable.
3. Switch off the power supply, e.g. at the separate fuse or a power supply disconnect switch.
   The power supply to the system is now switched off. There is **no** freeze-up protection.

→ *The settings of the control unit remain intact.*

Time programs

You can select time programs for heating, domestic hot water (if a DHW tank is installed) and the DHW re-circulation pump (if installed). The DHW re-circulation pump ensures that hot water is available at the taps when required.
A time program consists of 4 time cycles, i.e.

- *the heating can be switched up to 4 times per day to and from between the "normal room temperature" and the "reduced room temperature".*
- *the domestic hot water supply and DHW re-circulation pump can be switched on and off up to 4 times per day.*

Time cycle 1 is preset in the factory for all days of the week, i.e. during this time heating takes place with the normal room temperature, domestic hot water heating takes place and the DHW re-circulation pump is switched on.

The following buttons are assigned to the time programs:

Button	Time program for	Factory setting
⏲	heating	normal room temperature: 06:00 to 22:00 hrs
⏲	domestic hot water	ON: 05:30 to 22:00 hrs
⏲	DHW re-circulation pump	ON: 05:30 to 22:00 hrs

*You can set **identical** time programs for all days of the week or **individual** time programs for each day of the week.*

*When setting the time programs, please take into account the reaction time of the heating system. Therefore, choose correspondingly **earlier** starting and finishing times.*

Time programs *(continued)*

Changing and scanning the time program for heating

1. Open the hinged cover on the programming unit.

2. Press the heating circuit selector button; the button is illuminated.

3. ⏲ Press ⏲; the **"Heating time program"** display appears in the display window.

→ *If you wish to exit the time program setting mode, press ⏲ again (see page 14).*

4. ⊕/⊖ Press ⊕/⊖ until one of the following displays appears in the display window:

- **"1-7"** if you wish to set identical time cycles for all days of the week.

→ ***Please note:***
*If different time cycles are set for individual days of the week and you would like to set the same time cycles for all days again, press OK when the display "**1-7**" is showing. **All** time cycles are reset to their factory settings (see page 4).*

Htg. Time Program
1-7

or

- **Mo"**, **"Tu"** etc. if you wish to set different time cycles for the displayed day of the week.

Htg. Time Program
Mo

5. OK Press OK to confirm; the display changes to **"Heating time cycle 1"**.

→ *Press ⊕ to skip a time cycle.*

6. OK Press OK; the display changes to **"Heating cycle 1 ON"**.

7. ⊕/⊖ Press ⊕/⊖ until the required starting time of the heating cycle appears.

8. OK Press OK to confirm; the display changes to **"Heating cycle 1 OFF".**

9. ⊕/⊖ Press ⊕/⊖ until the required finishing time of the heating cycle appears.

10. OK Press OK to confirm; the display changes to **"Heating cycle 2 ON"**.

11. To set the start and end of heating cycles 2 to 4, follow the procedure described in points 7 to 9.

→ *After you have confirmed the last input with OK, the display changes and shows the boiler temperature.*

12. Close the hinged cover on the programming unit.

Time programs *(continued)*

Changing and scanning the time program for heating *(continued)*

To exit the setting mode at any time

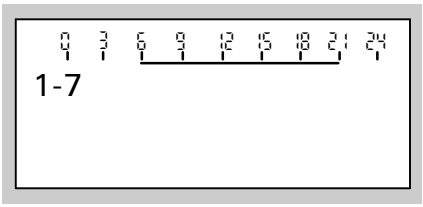
1. ⏲ Press ⏲; the display changes to **"Exit? Yes"**.
2. OK Press OK to confirm; the display changes and shows the boiler temperature.

To scan the time cycles

Follow the procedure described on page 13, but without using the + and − buttons.

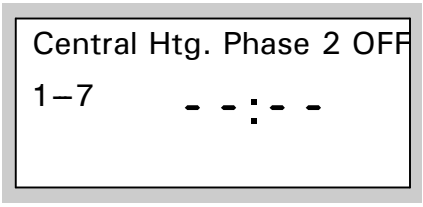
The time cycles at a glance

1. Open the hinged cover on the programming unit.
2. Press the heating circuit selector button; the button is illuminated.
3. Press ⏲ and i simultaneously; the preset time cycles appear on a time line graphic.
4. Close the hinged cover on the programming unit.



To erase the time cycles

1. Open the hinged cover on the programming unit.
2. Press the heating circuit selector button; the button is illuminated.
3. ⏲ Press ⏲; the **"Heating time program"** display appears in the display window.
4. OK Press OK until the required **"Heating cycle OFF"** appears.
5. − Press − until the display "– – : – –" appears for the finishing time.
6. OK Press OK to confirm until the display changes and shows the boiler temperature.
7. Close the hinged cover on the programming unit.



Time programs *(continued)*

Changing and scanning the time program for domestic hot water heating and the DHW re-circulation pump

*The **automatic mode** is selected in the time program for domestic hot water and the DHW re-circulation pump, i.e. domestic hot water heating takes place in parallel with the heating time program, but starts 30 minutes earlier.*
The DHW re-circulation pump runs parallel with the domestic hot water time program.

*If you do not require the automatic mode, you can also set **individual** time programs.*
The following example shows the steps required for setting a time program for domestic hot water heating. Follow the same steps when setting the time program for the DHW re-circulation pump (see table on page 12).

To select the automatic mode
(if required)

1. Open the hinged cover on the programming unit.

2. Press the heating circuit selector button; the button is illuminated.

3. Press ; the **"DHW time program"** display appears in the display window.

4. / Press / for **" Automatic?"** if "Automatic?" is not already shown in the display window.

5. Press to confirm.

To set an individual time program

1. Open the hinged cover on the programming unit.

2. Press the heating circuit selector button; the button is illuminated.

3. Press ; the **"DHW time program"** display appears in the display window.

→ *If you wish to exit the time program setting mode, press again (see page 17).*

4. / Press / for **"Individual?"** if "Individual?" is not already shown in the display window.

5. Press to confirm.

Time programs *(continued)*

Changing and scanning the time program for domestic hot water heating and the DHW re-circulation pump *(continued)*

DHW Time prog.
1–7

DHW Time prog.
Mo

6. ⊕/⊖ Press ⊕/⊖ until one of the following displays appears in the display window:

- **"1-7"** if you wish to set identical time cycles for all days of the week.

or

- **"Mo"**, **"TU"** etc. if you wish to set different time cycles for the displayed day of the week.

→ ***Please note:***
If different time cycles are set for individual days of the week and you would like to set the same time cycles for all days again, press OK when the display ***"1-7"*** *is showing.* ***All*** *time cycles are reset to their factory settings (see page 4).*

7. OK Press OK to confirm; the display changes to **"DHW time cycle 1"**.

→ *Press ⊕ to skip a time cycle.*

8. OK Press OK; the display changes to **"DHW cycle 1 ON"**.

9. ⊕/⊖ Press ⊕/⊖ until the required starting time of the DHW cycle appears.

10. OK Press OK to confirm; the display changes to **"DHW cycle 1 OFF"**.

11. ⊕/⊖ Press ⊕/⊖ until the required finishing time of the DHW cycle appears.

12. OK Press OK to confirm; the display changes to **"DHW cycle 2 ON"**.

13. To set the start and end of DHW cycles 2 to 4, follow the procedure described in points 9 to 12.

→ *After you have confirmed the last input with OK, the display changes and shows the boiler temperature.*

14. Close the hinged cover on the programming unit.

Time programs *(continued)*

Changing and scanning the time program for domestic hot water heating and the DHW re-circulation pump *(continued)*

To exit the setting mode at any time

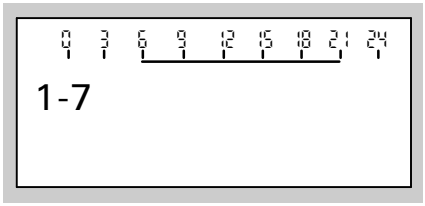
1. ⏲🚿 Press ⏲🚿; the display changes to **"Exit? Yes"**.
2. OK Press OK to confirm; the display changes and shows the boiler temperature.

To scan the time cycles

Follow the procedure described on page 15 and 16, but without using the ⊕ and ⊖ buttons.

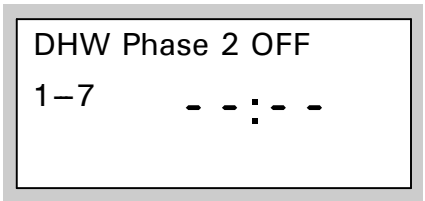
The time cycles at a glance

1. Open the hinged cover on the programming unit.
2. Press the heating circuit selector button; the button is illuminated.
3. Press ⏲🚿 and ⓘ simultaneously; the preset time cycles appear on a time line graphic.
4. Close the hinged cover on the programming unit.



To erase the time cycles

1. Open the hinged cover on the programming unit.
2. Press the heating circuit selector button; the button is illuminated.
3. ⏲🚿 Press ⏲🚿; the **"DHW time program"** display appears in the display window.
4. OK Press OK until the required **"DHW cycle OFF"** appears.
5. ⊖ Press ⊖ until the display "– – : – –" appears for the finishing time.
6. OK Press OK to confirm until the display changes and shows the boiler temperature.
7. Close the hinged cover on the programming unit.



5285 942 v1.4

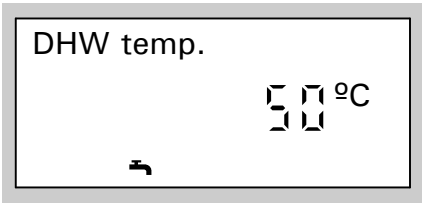
Time programs *(continued)*

Changing and scanning the time program for domestic hot water heating and the DHW re-circulation pump *(continued)*

Domestic hot water heating on a singular basis outside the programmed time cycle

1. Press the heating circuit selector button; the button is illuminated.
2. Press twice 2 to 3 seconds apart.

Changing the domestic hot water temperature



1. Open the hinged cover on the programming unit.
2. Press ; the previous temperature setting flashes in the display window.
3. Press the ⊕ /⊖ button until the required temperature value appears.
4. Confirm by pressing ⓞⓚ; the temperature value stops flashing and is stored. The display changes and shows the boiler temperature.
5. Close the hinged cover on the programming unit.

Setting the energy saving mode for the holiday period

If you want to set the heating system to the minimum energy consumption, e.g. while you are away on holiday, choose the holiday program or the standby mode (see "Selecting the heating program" on page 7).

Holiday program

- When the "" heating program is set (see page 7), heating takes place during the holiday program with the selected "reduced room temperature" (see page 8), but **without** domestic hot water heating.
  The preset time program for heating and domestic hot water is active on the dates of your departure and return.

→ *The control unit is set up so that the holiday program is effective for **all** heating circuits.*
If you require this to be changed, please contact your heating contractor.

Setting the energy saving mode for the holiday period *(continued)*

■ When the "🚿" heating program is set (see page 7), **only** freeze-up protection of the heating system takes place during the holiday program.
Domestic hot water heating takes place according to the preset time program on the dates of your departure and return.

1. Open the cover on the programming unit.

2. 💼 Press 💼; the **"Holiday program"** display appears in the display window.

→ *If you want to erase the holiday program during the setting procedure, press 💼 again and confirm "Erase? Yes" with OK.*

3. OK Press OK; the display changes to the **"Departure date"** (actual day of the week).

4. ⊕/⊖ Press ⊕/⊖ until the required departure date appears.

5. OK Press OK to confirm; the display changes to the **"Return date"** (the return date shown is the day following the entered departure date).

6. ⊕/⊖ Press ⊕/⊖ until the required return date appears.

7. OK Press OK to confirm; the display changes and shows the boiler temperature.

8. To set the temperature for the duration of the holiday program (only in the "🏠🚿" heating program):
- ■ Press 🌡🌙.
- ■ Set the required value with the ⊕ or ⊖ button.
- ■ Confirm by pressing OK; the temperature value stops flashing and is stored.

→ *This temperature also applies to the reduced room temperature outside the holiday program.*

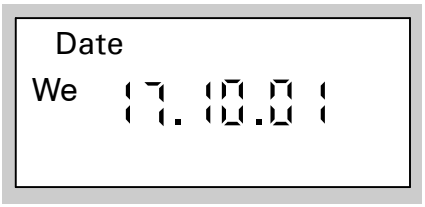
9. Close the hinged cover on the programming unit.

After the departure date, "Holiday program" and the actual date appear in the display window. On the return date, the boiler temperature appears in the display window.

→ *If you want to cancel the holiday program before the selected return date, press 💼 again and confirm "Erase? Yes" with OK.*

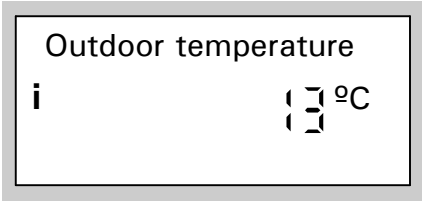
Resetting the time and date

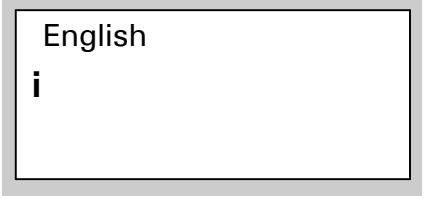
The time and date are preset in the factory and can be changed manually.



1. Open the hinged cover on the programming unit.
2. ⏲/📅 Press ⏲/📅; the **"Time"** appears in the display window.
3. ⊕/⊖ Press ⊕/⊖ until the required time appears.
4. OK Press OK to confirm; the display changes and shows the **"Date"**.
5. ⊕/⊖ Press ⊕/⊖ until the required date appears.
6. OK Press OK to confirm; the display changes and shows the boiler temperature.
7. Close the hinged cover on the programming unit.

Selecting the language





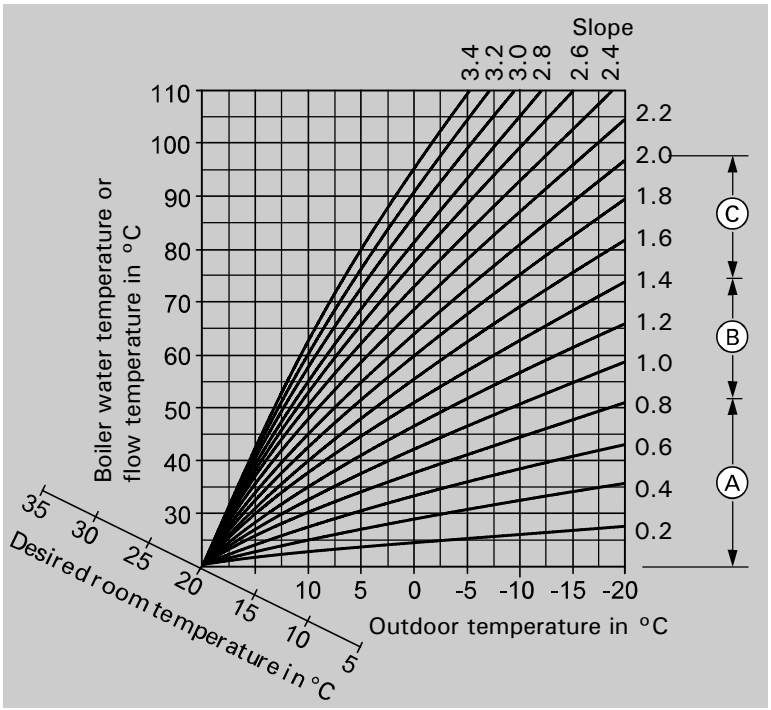
1. Open the hinged cover on the programming unit.
2. Press the heating circuit selector button; the button is illuminated.
3. ⓘ Press ⓘ; the **"Outdoor temperature"** appears in the display window.
4. ⊖ Press ⊖ until the required language appears.
5. OK Press OK to confirm; the display changes and shows the boiler temperature.
6. Close the hinged cover on the programming unit.

Changing the heating pattern of the boiler

The heating pattern of the boiler is influenced by the outdoor temperature and the settings of the "shift" and "slope" of the "heating curve". Heating curves represent the relationship between the outdoor temperature and the boiler water or supply temperature. Put simply: The lower the outdoor temperature, the higher the boiler water or supply temperature.

You can change the setting of the heating curve, if you establish over a prolonged period during the heating season, that the room temperature does not meet your requirements.
Please observe the difference in the heating pattern over a sufficiently long period before altering the settings again.
Short-term changes in the room temperature are carried out with the "🌡☀" selector knob or with the "🌡☽" button (see "Changing the room temperature" on page 8).

Please note:
In the factory settings, the slope is set to 1.4 and the shift to 0.
The heating curves shown apply to the following settings:
- *"Shift of heating curve" = 0*
  With a different shift setting, the curves are shifted parallel in a vertical direction.
- *"Normal room temperature ☀" = approximately 20°C / 68°F .*
  Please see back of manual for conversion chart.

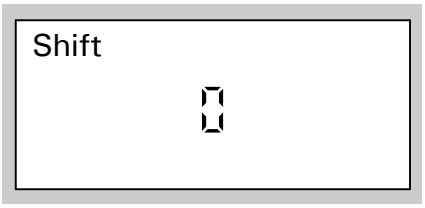


The slope of the heating curve is normally within the range marked
- Ⓐ for underfloor heating systems,
- Ⓑ for modulating heating systems,
- Ⓒ for heating systems with boiler water temperatures over 75°C / 167°F.

→ ***Examples***
- *Well insulated house in protected position (radiator heating):*
  Slope = 1.2
- *House in exposed position or with old heating system (radiator heating):*
  Slope = 1.6

Changing the heating pattern of the boiler *(continued)*

Changing the heating pattern by adjusting the heating curve



1. Open the hinged cover on the programming unit.

2. Press the heating circuit selector button; the button is illuminated.

3. Press for **"Slope"** or press for **"Shift"**.

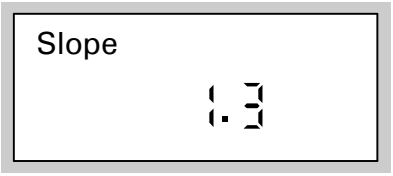
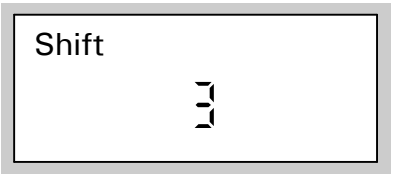
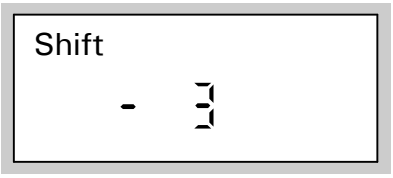
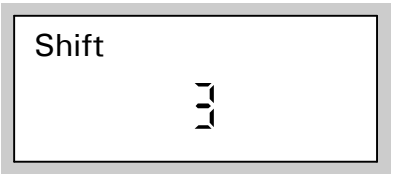
→ *As a guide, please refer to the table headed "Change heating pattern if..." on page 23.*

4. Press ⊕ / ⊖ until the required value is displayed.

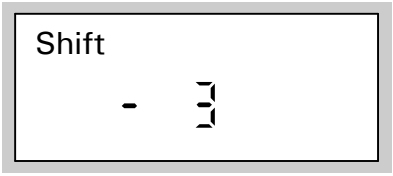
5. Press OK to confirm; the display changes and shows the boiler temperature.

6. Close the hinged cover on the programming unit.

Changing the heating pattern *(continued)*

Change heating pattern if …	Action	Example
… the boiler water temperature is **too low** in the **cold season**	Adjust the **slope** of the heating curve **upwards by one increment**	
… the boiler water temperature is **too high** in the **cold season**	Adjust the **slope** of the heating curve **downwards by one increment**	
… the boiler water temperature is **too low** at **transitionary times of the year** and in the **cold season**	Adjust the **shift** of the heating curve to a **higher** value (e.g. +3°C / +5°F)	
… the boiler water temperature is **too high** at **transitionary times of the year** and in the **cold season**	Adjust the **shift** of the heating curve to a **lower** value (e.g. -3°C / -5°F)	
… the boiler water temperature is **too low** at **transitionary times of the year**, but adequate in the cold season	Adjust the **slope** of the heating curve **downwards by one increment**, and the **shift** to a **higher** value (e.g. +3°C / +5°F).	 

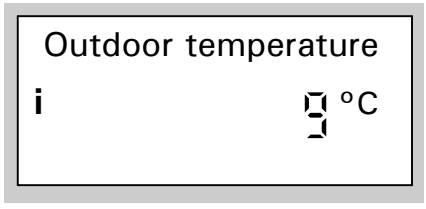
Changing the heating pattern *(continued)*

Change heating pattern if …	Action	Example
… the boiler water temperature is **too high** at **transitionary times of the year**, but adequate in the cold season	Adjust the **slope** of the heating curve **upwards by one increment**, and the **shift** to a **lower** value (e.g. -3°C / -5°F).	
		

Scanning temperatures and operating status information

You can scan various actual temperatures and operating status information depending on the system components connected and the settings made.

- *User no.* → *in conjunction with Vitotronic 050 heating circuit control unit*
- *Holiday program with dates of departure and return* → *if entered*
- *Holiday program active* → *if holiday program is activated*
- *Outdoor temperature*
- *Boiler temperature*
- *Flue gas temperature* → *if sensor installed*
- *Sensor 17A* → *if sensor installed*
- *Sensor 17B* → *if sensor installed*
- *Domestic hot water temperature*
  - *DHW temperature 1* → *if 2 DHW tank temperature sensors are connected*
  - *DHW temperature 2*
- *Supply temperature* → *for heating circuit with mixing valve*
- *Room temperature* → *if Vitotrol remote control installed*
- *Burner hours run* → *The burner hours run can be reset to "0" by pressing the ⏐◂ button while the display is on.*
  - *1st stage burner*
  - *2nd stage burner*
- *Number of burner starts* → *if the corresponding setting has been carried out by the heating contractor*
- *Fuel consumption*
- *Time*
- *Date*
- *Burner ON/OFF*
  - *1st stage burner*
  - *2nd stage burner*
- *Output 20 ON/OFF*
- *Output 29 ON/OFF*
- *Output 52 Open/Closed*
- *DHW pump ON/OFF*
- *DHW re-circulation pump ON/OFF* → *0 = Closed, 1 to 99 (%), 100 = Open*
- *Heating circuit pump ON/OFF*
- *Mixing valve Open/Closed*
- *Language*



1. Open the hinged cover on the programming unit.

2. Press the heating circuit selector button; the button is illuminated.

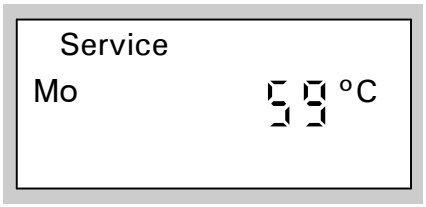
3. ⓘ Press ⓘ; the **"Outdoor temperature"** appears in the display window.

4. ⊕/⊖ Press ⊕/⊖ to scan other data.

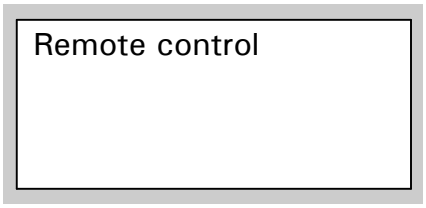
5. ⓘ Press ⓘ to exit the scanning mode.
The display changes and shows the boiler temperature.

6. Close the hinged cover on the programming unit.

Special displays

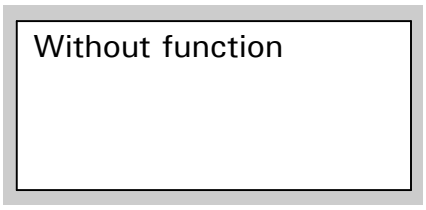


Please contact your heating contractor to arrange a service call.



It is not possible to make settings on the control unit, only on the remote control.

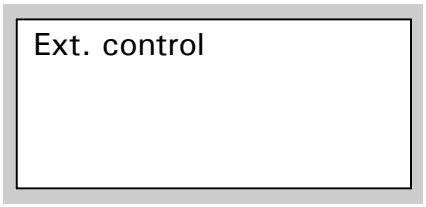
→ ***Example***
"Normal room temperature" on the "☀" selector knob can only be set on the remote control.



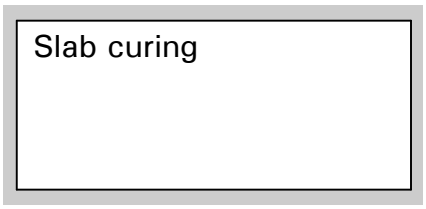
This display flashes when you have pressed a button to which no function is assigned.

→ ***Example***
🕘🚰 *if no DHW tank is connected.*

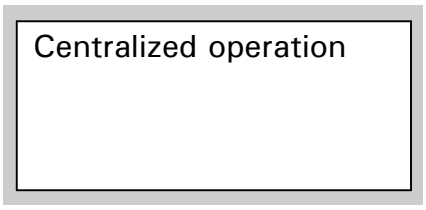
Changeover of the heating program



The heating program which is set on the control unit has been switched over by an external control.



If slab curing is coded, this display appears until the function is terminated.

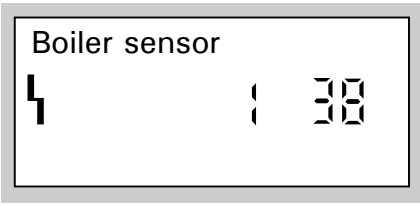


The setting of the heating and holiday program is accepted by the heating circuit for which "centralized operation" is coded.

Diagnosis and correction

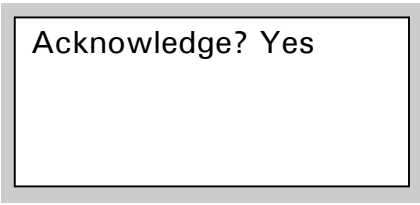
If a fault occurs on the heating system, it will be indicated in the display window and by the flashing red fault indicator (see page 5).
Using the scan facility, you can read off the fault code yourself and inform your heating contractor accordingly.

1. Open the hinged cover on the programming unit.



2. ⓘ Press ⓘ for fault search. The error source is displayed in plain language and in the form of a fault code.

→ ***Example***
- *Fault display*
- *Error number*
- *Sensor designation*
  ≙ plug designation
- *Open circuit*
  or
  Short circuit



3. ⓞⓚ Press ⓞⓚ; the display changes to **"Acknowledge? Yes"**.

→ *Press "Acknowledge?" to confirm that you have noted the fault.*

Please note:
The fault message will re-appear at 07:00 hrs on the following day if the fault is not corrected in the meantime.
The red fault lamp continues to flash until the fault has been corrected.

4. ⊕/⊖ Press ⊕/⊖ for **"Yes"** or **"No"**.

5. ⓞⓚ Press ⓞⓚ to confirm; the display changes and shows the boiler temperature.

6. Close the hinged cover on the programming unit.

To call up an acknowledged fault message

1. ⓞⓚ Press ⓞⓚ for approximately 2 seconds.

→ *The fault is displayed.*

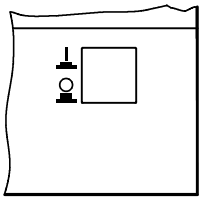
2. ⊕/⊖ Press ⊕/⊖ to display further faults.

→ *Only if two or more faults have occurred.*

Diagnosis and correction *(continued)*

Fault	Cause	Remedy
Heating system does not start up	Heating system switch "⏻" on the control unit turned to OFF	Switch on
	Power supply disconnect switch, if installed, is switched off	Switch on power supply disconnect switch
	Fuse in the domestic power circuit or in the control unit has blown or tripped	Inform heating contractor
Burner does not switch on or only erratically	Control unit incorrectly programmed or set	Check setting of heating program and programming of the programming unit, and correct if necessary
	Fault on control unit	After consulting your heating contractor, the boiler can be operated temporarily with constant boiler water temperature by turning the override switch "🔧" to "✋" (see page 5) (leave cover open)
	No fuel	Oil/LPG: Check fuel supply and re-order if necessary. Natural gas: Open gas shut-off valve or contact gas supply company if necessary.
Burner is operating, but no hot water (only on systems with DHW tank)	Control unit incorrectly programmed or set	Check time program for domestic hot water heating (page 12 and 15), check domestic hot water temperature (page 18), and correct if necessary
	DHW tank temperature sensor defective	Inform heating contractor

Diagnosis and correction *(continued)*

Fault	Cause	Remedy
Burner does not start; red fault indicator flashes on the control unit (see page 5) and red fault lamp is illuminated on the burner	Faulty start of burner	Make a new attempt to start by pressing the reset button on the front of the burner hood with pressure jet burners, on the front panel of the boiler with atmospheric burners. If the burner still fails to operate after pressing the reset button, check the points stated in the section headed "Starting up the heating system" and then press the reset button again. If the burner still fails to switch on, contact your heating contractor.
The rooms are cold even though the burner is operating	Time incorrectly set	Set correct time (page 20)
	Heating program "🚿" or "⏻" is set (corresponding button is illuminated)	Set heating program "🏠🚿" (page 6)
	Operation with domestic hot water tank only: Domestic hot water supply has priority (🚿 in display window)	Wait until the domestic hot water tank has heated up (🚿 is turned off in the display window)
	On/off switch on the mixing valve motor is turned to OFF	Turn the on/off switch to **I** ≙ ON 
The room temperature is not high enough with a low outdoor temperature	Heating curve setting incorrect	Check and, if necessary, correct the heating curve setting (page 21)
	Control unit incorrectly programmed or set	Check and, if necessary, correct the settings for the temperatures (page 8), the time program (page 12) and the heating program (page 7)
Cold during the day, but warm at night	Time incorrectly set	Set correct time (page 20)
	Control unit incorrectly programmed or set	Check and, if necessary, correct the settings for the temperatures (page 8), the time program (page 12) and the heating program (page 7)
"Fault" flashes in the display window	Fault on heating system	Make a note of the fault code and inform your heating contractor (page 26)
"Without function" appears in the display window of the control unit	The button pressed has no function, e.g. 🕘🚿 if no DHW tank is connected	

Servicing/cleaning instructions and note on disposal of unwanted equipment

Servicing
Servicing of heating systems is required under current heating system regulations and standards (DIN 4755, DIN 4756 and DIN 1988-8).

Regular servicing of the heating system will ensure troublefree, energy-saving and environmentally friendly heating. We strongly advise you to arrange a service contract with your heating contractor.

Operational checks
The following operational checks should be carried out every month:
- Regularly check the pressure of the system.
- Check correct operation of safety valve.
- Check correct operation of control equipment.
- Check all seals and re-seal if necessary.
- Check the ventilation facilities of the boiler room (see safety note on page 2).
- Check function of neutralizing unit.
- Check level of neutralizing agent.

Boiler
All boilers have to be cleaned at certain intervals as the flue gas temperature and therefore the energy loss rise as the level of contamination increases.

We recommend the use of a flue gas thermometer.
The flue gas temperature can be monitored with the flue gas temperature sensor which is available as an accessory. A flue gas temperature monitoring system will provide an indication of incorrect burner adjustment and the degree of contamination of the boiler.

The efficiency of the system will be impaired if the flue gas temperature is excessively high due to contamination of the boiler or incorrect adjustment of the burner. In this case it may be necessary to clean the boiler or readjust the burner.

A built-in hours run meter measures the operating times of the burner. The longer the operating times, the lower the standby losses (see VDI 2067 for guide values).

Quick Reference

°C	°F
-40	-40
-35	-31
-25	-13
-20	-4
-18	0
-16	+3
-14	+7
-12	+10
-10	+14
-9	+16
-8	+18
-7	+19
-6	+21
-5	+23
-4	+25
-3	+27
-2	+28
-1	+30
0	+32
+1	+34
+2	+36
+3	+37
+4	+39
+5	+41
+6	+43
+7	+45
+8	+46
+9	+48
+10	+50
+12	+54
+14	+57
+16	+61
+18	+64
+20	+68
+25	+77
+30	+86
+35	+95
+40	+104
+50	+122
+60	+140
+70	+158
+80	+176
+90	+194
+100	+212
+110	+230

Printed on environmentally friendly (recycled and recyclable) paper.

Technical information subject to change without notice.

5285 942 v1.4

Viessmann Manufacturing Company (U.S.) Inc.
45 Access Road
Warwick, Rhode Island • 02886 • USA
Tel. (401) 732-0667 • Fax (401) 732-0590
www.viessmann-us.com • info@viessmann-us.com

Viessmann Manufacturing Company Inc.
750 McMurray Road
Waterloo, Ontario • N2V 2G5 • Canada
Tel. (519) 885-6300 • Fax (519) 885-0887
www.viessmann.ca • info@viessmann.ca